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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,548	03/21/2001	Richard E. Gahan	072545-0028	3680

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NUTTER MCCLENNEN & FISH LLP
WORLD TRADE CENTER WEST
155 SEAPORT BOULEVARD
BOSTON, MA 02210-2604

EXAMINER

RADEMACHER, MARK A

ART UNIT	PAPER NUMBER
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3761

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DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,548

Applicant(s)

GAHAN ET AL.

Examiner

Mark Rademacher

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 38-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on March 21, 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Claims 38-54 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse during a telephone conference with Lisa J. Michaud on April 17, 2003.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

3. Inventions embodied in claims 1-37 and claims 38-54 are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the electret filter media and respirator recited in claims 1-37 can be made by a process unrelated to vapor deposition, such as spray coating or dipping.

Accordingly, the inventions are distinct.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The current set of drawings only depicts a schematic set of manufacturing equipment and a manufacturing flow chart. None of the products claimed are depicted in the drawings. Therefore, the respirator including a filtration element and the filtration media with its constituent layers must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 36 and 37 are objected to because of the following informalities: The preamble of the claims references "the electret filter media" of parent claims 34 or 35. However, the parent claims 34 and 35 are directed to respirators. It appears the preambles of claims 36 and 37 should read "the respirator of" claim 34 or 35. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent no. 5,645,627 to *Lifshutz et al.*

8. *Lifshutz et al* discloses a charge stabilized electret filter media comprising a melt blown polymer fiber web having formed on at least one surface thereof a polymer coating. See, column 6, lines 57-61.

9. *Lifshutz et al* disclose media including a meltblown polymer fiber web that is formed from polymers such as polyolefins, acrylics, vinyl halides, polyvinyl ethers, polyvinyl halides, polyacrylonitrile, polyvinyl ketones, polyvinyl esters, polyamides, polyesters, polycarbonates, polyamides, polyesters and fluoropolymers. Column 2, lines 15-21 and column 3, lines 61-65. *Lifshutz et al* disclose such fibers having a diameter in the range of between about 1 to 20 μm and a fiber web having a basis weight between about 10 and 520 g/m. Column 3, line 61 through column 4, line 10.

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10. *Lifshutz et al* also disclose that the polymer web having the incorporated charge-stabilizing additive is heat-treated either before or after the web is charged in order to enhance the charge stability of the resulting filter. Column 5, line 51 through column 6, line 16. The media described therein inherently includes a polymer coating on the surface of the fiber web by causing the fluorochemical additive to “bloom” on the surface of the fibers. See, e.g., column 13, lines 44-50 of US patent no. 6,288,157 to *Jariwala et al*.

11. In either case (additive sprayed on, or additive incorporated and “bloomed” on the surface of the fibers) the resulting layer is inherently a fluoropolymer such as polytetrafluorethylene or fluorinated ethylene propylene depending on which of the disclosed polymer fiber web material(s) is used.

12. *Claim 6*

13. Claims 6, 26 and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by *Lifshutz et al*, or under 35 U.S.C. 102(a) as being anticipated by international publication no. WO 00/78430 (‘430 publication).

14. With respect to claim 6, it is the examiner’s position that the P value for the filter media disclosed by *Lifshutz et al* is inherently 95. In any event the ‘430 publication specifically discloses filter media having the same construction as that claimed and a P 95. See, Table 1 and page 5 line 2 through page 9, line 10 and page 13, lines 1-3.

15. Claims 26 and 31-37

16. Claims 26 and ~~31~~-37 are rejected under 35 U.S.C. 102(a) as being anticipated by the '430 publication.

17. The '430 publication discloses respirators having a filter element including an annealed melt blown electret polymer fiber web including all of the features recited in the claims. See page 9, lines 11-15, page 5 line 2 through page 10, line 21 and page 13, lines 1-3.

18. *Lifshutz et al* disclose that the particular charge-stabilizing additive is a fatty acid amide such as stearamide, ethylene bis-stearamide or ethylene bis-palmitamide, and is present in a weight-concentration of 0.5 to 1.5%. Column 3, lines 41-43, and column 4, lines 30-28.

Claim Rejections - 35 USC § 102/§ 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5 and 17-25

19. Claims 2-5 and 17-25 are rejected under 35 U.S.C. 102(b) as anticipated by *Lifshutz et al* or, in the alternative, under 35 U.S.C. 103(a) as obvious over *Lifshutz et al* in view of the

publication "Barrier Properties of Plasma and Chemically Fluorinated Polypropylene and Polyethyleneterephthalate" by *Friedrich et al.*

20. The applicant should note that the method of forming an article is not germane to the issue of patentability of the article itself. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). MPEP 2113.

21. *Lifshutz et al* disclose all of the features of the article recited in claims 2-5 and 17-25. In particular *Lifshutz et al* disclose a meltblown polymer web including an equivalent fluorinated polymer coating formed on one surface thereof - either by spray coating or through an annealing step. Column 6, lines 57-61, column 5 line 51 through column 6, line 16, column 2, lines 15-21, and column 3, lines 61-65.

22. However, if the applicant maintains that the filter media recited in the claims is not expressly disclosed by *Lifshutz et al*, such a filter media would have been obvious in view of the teaching of *Friedrich et al.*

23. *Friedrich et al* publication expressly discloses the creation of a fluorine polymer surface layer on polymer substrates wherein the coating is formed from the monomer hexafluoropropylene. See the paragraph bridging pages 910 and 911. One would have been motivated to create the polymer coating using the fluorine-containing monomer like that taught by *Friedrich et al* in order to create a highly dense and cross linked structure and/or allow for

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higher web speeds by using vapor deposition to create the fluorinated polymer coating on the filtration media.

Rebuttal

24. Similarly, claims 26-30 are rejected under 35 U.S.C. 102(b) as anticipated by *the* '430 publication or, in the alternative, under 35 U.S.C. 103(a) as obvious over the '430 publication in view of the *Friedrich et al* publication.

25. The '430 publication discloses nearly identical filter media as disclosed by *Lifshutz et al* and the media as part of a filter element in a respiratory mask.

26. Again, if the applicant maintains that the filter media recited in the claims is not expressly disclosed by *Lifshutz et al*, such a filter media would have been obvious in view of the teaching of *Friedrich et al*.

27. *Friedrich et al* publication expressly discloses the creation of a fluorine polymer surface layer on polymer substrates wherein the coating is formed from the monomer hexafluoropropylene. See the paragraph bridging pages 910 and 911. One would have been motivated to create the polymer coating using the fluorine-containing monomer like that taught by *Friedrich et al* in order to create a highly dense and cross linked structure and/or allow for higher web speeds by using vapor deposition to create the fluorinated polymer coating on the filtration media.

Claim Rejections - 35 USC § 103

28. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Lifshutz et al* in view of the *Friedrich et al* publication.

29. *Lifshutz et al* disclose a melt blown polymer fiber web having formed on at least one surface thereof a polymer coating. See, e.g., column 6, lines 57-61. *Lifshutz et al* do not expressly disclose the thickness of the polymer coating.

30. However, polymer coatings of the thickness claimed are expressly disclosed in the *Friedrich et al* publication. Specifically *Friedrich et al* disclose the formation of a fluorinated layer via vapor deposition of a fluoride-containing monomer to form a surface layer that was 10-100 nm thick, i.e., 100 to 1000 Angstroms thick. See the abstract and Introduction of the *Friedrich et al* publication.

31. At the time of invention it would have been obvious to one with ordinary skill in the art to modify the coated polymer web disclosed by *Lifshutz et al* to include the vapor deposited coating disclosed by *Friedrich et al* in order to minimize the amount of coating materials used to create the filter media and take advantage of faster processing times afforded by the use of coatings deposited by vapor deposition.

Additional Pertinent Prior Art

32. The following prior art is also pertinent to the applicant's disclosure: US patent nos. 5,472,481 and 5,411,576 to *Jones et al*, 6288157 to Jariwala et al, 6268495, 6002017, 5968635, 5976208, 6238466 and 6214094 to *Rousseau et al*, 6419871 to *Ogale*, 4407852 to *Sapieha et al*, 5935303 to *Kimura*, 5025052 to *Crater et al*, 5726107 *Dahringer et al*, 6524360 to *Cox et al*; published US patent application no. US 2001/0039879 to *Chapman*; and Published international application no. WO 01/07144 A1 to *Gahan*.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Rademacher whose telephone number is (703) 305-0842. The examiner can normally be reached on Monday through Friday, 9:30am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (703) 308-1957. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

MAR
May 9, 2003

GLD
GLENN K. DAWSON
PRIMARY EXAMINER